

#### **DrugFacts**

Revised October 2019

## Substance Use and Military Life DrugFacts

#### General Risk of Substance Use Disorders

The stresses of deployments and the unique culture of the military offer both risks and protective factors related to substance use among active duty personnel.

Deployment is associated with smoking Zero-tolerance policies, lack of conficen drug use can also add to stigma, and co example, half of military personnel have issues would negatively affect their military personnel is relatively low and ciga decreased in recent years. In contrast, population.



Photo by Staff Sgt. Lexie West

Camp Simba conducts inaugural flag ceremony
Service members can face dishonorable discharge and even criminal prosecution for a positive drug
test, which can discourage illicit drug use. Once active duty personnel leave the military some
protective influences are gone, and substance use and other mental health issues become of greater
concern.

More than one in ten veterans have been diagnosed with a substance use disorder, slightly higher than the general population.<sup>3</sup> One study found that the overall prevalence of substance use disorders (SUDs) among male veterans was lower than rates among their civilian counterparts when all ages

were examined together. However, when looking at the pattern for only male veterans aged 18–25 years, the rates were higher in veterans compared with civilians.<sup>3</sup> The veteran population is also greatly impacted by several critical issues related to substance use, such as pain, suicide risk, trauma, and homelessness.

### Illicit drugs

#### Among Active Duty Personnel:

Rates of illicit drug use among active duty service members have decreased in recent years and were at lower levels in the 2015 Health Related Behaviors Survey (HRBS) compared to the 2011 survey. The HRBS is the flagship survey for understanding the health, health-related behaviors and well-being of service members funded by the Department of Defense. It should be noted that the survey relies on self-reporting, and response rate is low, at 8.6%. However, it does provide a glimpse into substance use among active duty personnel.

The 2015 survey reported that illicit drug use in the past year was reported by less than 1 percent across all service branches and among both enlisted personnel and officers. By comparison, a large government self-reported survey of civilians suggests about 1 in 5 young adults aged 18 to 25 (22.3%) were current users of illicit drugs in 2015.

#### Veterans:

Reported rates of illicit drug use increase when active duty personnel leave military service. Marijuana accounts for the vast majority of illicit drug use among veterans with 3.5% reporting use, and 1.7% reporting use of illicit drugs other than marijuana in a 1-month period. From 2002 to 2009, cannabis use disorders increased more than 50% among veterans treated by in the Veterans Health Administration (VHA) system. Other illicit drugs are of concern for some veterans. One government report notes that more than ten percent of veteran admissions to substance use treatment centers were for heroin (10.7%), followed by cocaine at just over 6%.

# Opioid and other Prescription Drug Misuse Active Duty:

Among active-duty service members in the 2015 HRBS, just over 4% reported misusing one or more prescription drug types in the past year.  $\frac{2}{3}$ 

There has been much discussion about the amount of prescription pain medications prescribed to injured and sick military personnel, especially during the transition to medical discharge. Military physicians wrote nearly 3.8 million prescriptions for pain medication in 2009, more than quadruple the number of such prescriptions written in 2001. However, in the past few years, self-reported use of both prescription opioid pain relievers and use of sedatives has decreased among active duty personnel. From 2011 to 2015, the percentage of service members using pain relievers in the past month decreased by nearly half, likely reflecting prevention and appropriate prescribing initiatives set in motion by the Department of Defense. Nonetheless, these medications were misused and overused more often than other drugs. Prescription drug misuse was highest in the Army and lowest in the Coast Guard.

Opioid use disorders among military personnel often begin with a opioid pain prescription following an injury during deployment. However, due to the addictive nature of opioids, particularly coupled with mental health struggles experienced by some military service men and women, regular use of opioids can lead to addiction.

#### Veterans:

Many veterans have unique issues related to pain management, with two-thirds reporting they experience pain. More than 9% reported that they experience severe pain, compared to only 6.4% of non-veterans, putting them at higher risk for accidental opioid pain reliever overdoses. From 2001 to 2009, the percent of veterans in the VHA system receiving an opioid prescription increased from 17% to 24%. Similarly, the overall opioid overdose rates of veterans increased to 21% in 2016 from 14% in 2010. However, the overdose increases were mostly from heroin and synthetic opioids, and not from opioids taken for pain relief.

#### Alcohol

#### **Active Duty:**

Alcohol use disorders are the most prevalent form of SUDs among military personnel. <sup>5</sup> It is challenging to compare overall rates to the non military population because service personnel tend to be younger

and have a higher percentage of males, putting them at greater risk in general. However, increased combat exposure involving violence and trauma experienced by those who serve result in an increased risk of problematic drinking. The 2015 HRBS report concluded that across all services, 5.4 percent of military personnel were heavy drinkers compared to 6.7 percent in the general adult population reported in 2014. However, binge drinking was reported as higher among active duty personnel (30% vs. 24.7%), although lower than the 33% reported in 2011. One in three of service members were binge drinkers, comparable to a 2014 estimate of one in four in the general population. More than one in three service personnel met criteria for hazardous drinking or possible alcohol use disorder, with rates higher among men than women.

#### Veterans:

A 2017 study examining National Survey on Drug Use and Health data found that, compared to their non-veteran counterparts, veterans were more likely to use alcohol (56.6% vs 50.8% in a 1-month period), and to report heavy use of alcohol (7.5% vs 6.5% in a 1-month period). Sixty-five percent of veterans who enter a treatment program report alcohol as the substance they most frequently misuse, which is almost double that of the general population.

## **Smoking**

#### Active Duty:

Deployment and combat exposure puts service personnel at risk for smoking initiation, but rates have decreased in recent years. The 2015 HRBS report showed that close to 14% of service members were current cigarette smokers and more than 7% smoke daily. This roughly compares to a rate of 15% of current smokers in the general U.S. adult population in 2015, with 11% smoking daily. The 2015 rates in the military represent a decrease from 24% in 2011 (with 13% reported as daily smokers.) The 2015 report also showed that nearly 9% of military service personnel were current cigar smokers and nearly 13% used smokeless tobacco. Close to 40% of those who smoke started after enlisting, underscoring the need for prevention strategies for new active duty personnel. The Department of Defense offers smoking cessation programs, and in 2016 prohibited tobacco use on its medical facilities, with a goal to achieve tobacco-free installations by 2020.

#### **Veterans:**

Data suggests that veterans are more likely to use tobacco products than their non-veteran counterparts in nearly all age groups , with close to 30% reporting use. The high prevalence of tobacco use among people with military experience has had a significant financial impact on the VHA, costing an estimated \$2.7 billion (7.6% of its expenditures) on smoking-related ambulatory care, prescription drugs, hospitalization, and home health care.

In addition, a higher proportion of veterans with coronary heart disease are smokers compared to civilians with similar diagnoses. For those without heart disease, veterans are more likely to be former smokers than all civilians. In recent years, the VHA has made efforts to increase access to tobacco cessation treatment options,  $\frac{9}{2}$  yielding some results.

#### Vaping and E-Cigarettes:

The 2015 HRBS report asked about e-cigarettes; however, the information is now several years old, with a new report in development. Even in 2015, 12.4 percent of service members reported they had vaped within the last month, with 11.1 percent saying they were daily e-cigarette users, roughly compared to 3.7% reporting regular use in the general population in 2014.

In 2017, the U.S. Navy issued a <u>report</u> that there had been more than 15 mishaps with vaping devices causing personal injuries or fire damage, about half happening on board Navy vessels or aircraft. As a result, e-cigarettes were banned throughout the fleet.

With the growing number of serious lung illnesses and deaths related to vaping reported in 2019, service members and their families were officially <u>alerted</u> about the dangers, and encouraged not to use e-cigarette products. Subsequently, in October 2019 the Army, Air Force and Navy banned sales of vaping devices from retail exchanges on bases.

## Substance Use, Mental Health and Military/Veteran Life

All veterans experience a period of readjustment as they leave the military and reintegrate into life with family, friends, and their community, leaving them with unique mental health challenges. A number of environmental stressors specific to military personnel have been linked to increased risk of SUDs among military personnel and veterans, including deployment, combat exposure, and post-deployment civilian/reintegration challenges. Among veterans presenting for first-time care within the VHA

system, close to 11% meet criteria for an SUD diagnosis. Veterans with SUDS commonly meet the criterial for co-occurring mental health disorders such as PTSD, depression and anxiety.

Those who have experienced trauma or were hospitalized or injured during combat are at risk for increased drinking or drug use. Veterans with SUDs are 3-4 times more likely to receive a PTSD or depression diagnosis.<sup>3</sup>

It is estimated that between 37 and 50 p diagnosed with a mental disorder. The disorders (SUDs), as are other problems reintegration stresses, sleep disturbance



Onset of SUDs can also emerge secondary to other mental health problems as sociated with the sensors, such as post-traumatic stress disorder (PTSD) and depression.

Deployments, combat exposure and combat-related injuries may

lead to the development of substance use problems.

#### Counseling

Research suggests that relatively few service members receive counseling related to SUDs, however there are few studies on SUD services received in the military. 1 Behavioral interventions for the management of SUDs typically involve short-term, cognitive-behavioral therapy interventions. These interventions focus on the identification and

#### SUDs, PTSD and Depression

Among recent Afghanistan and Iraq veterans, 63% diagnosed with SUDs also met criteria for posttraumatic stress disorder (PTSD). Veterans dually diagnosed with PTSD and SUDs are more likely to have additional co-occurring psychiatric and tobacco—behavioral counseling is medical conditions, such as seizures, liver disease, HIV, schizophrenia, anxiety disorders, and bipolar disorder.

#### Suicide

Suicide deaths among active duty military and veterans exceed the rate for the general population. In medicines for treatment, making 2014, veterans comprised more than 20 percent of national suicides, with an average of 20 veterans dving by suicide every day. In 2016, the suicide rate was 1. veteran adults, after adjusting for age and gender.

substance use disorders, including ary. About 30% of Army suicides and over smaking cessation support. There 45% of suicide attempts since 2003 involved alcohol or drug use. In addition, an estimated 20% of are also several services and overdose. high-risk behavior deaths were attributed to alcohol or drug overdose.

Researchers have looked at the possible link between suicide, pain and prescription pain medications. In a 2017 VA study of nearly 124,000 veterans, those receiving the highest doses of opioid pain relievers were more than twice as likely to die by suicide, compared with those receiving the lowest

other factors that drive suicide—including unresolved severe chronic pain.

thoughts and behaviors associated with increased craving, use, or relapse to substances. With some an effective companion to approved medication therapy. With

modification of maladaptive

other drugs, such as cocaine and marijuana, there are no approved .5 times greater for veterans than for non-treatment. The military offers free counseling services for alcohol and

interventions available to help

Homelessness

U.S. military veterans are estimated to be a large portion (around 11 percent) of homeless adults. According to a 2014 study, around 70 percent of homeless veterans also have a substance use In 2011, about one fifth of veterans in substance use treatment were homeless. homeless veterans experience unique challenges and barriers to substance use disorder treatment. Targeting homeless veterans in need of treatment so that they can receive support through outreach services, case management, and housing assistance can improve their chances of entering substance

But most of those suicides are with firearms, not opioids, and it is unclear if there's a direct

causal link between the pain medications and suicide risk or if the high doses may be a marker for

use treatment and experiencing positive outcomes.

## Addressing the Problem

A 2012 Institute of Medicine (IOM) report identified a number of barriers to substance use disorder care among active duty military personnel and veterans, including limited access to treatment, gaps in insurance coverage, stigma, fear of negative consequences, and lack of confidential services. The report offered remedies, including increasing the use of evidence-based prevention and treatment interventions and



Photo by Spc. Ryan Lucas

U.S. Army paratroopers assigned to the 173rd Airborne Brigade conduct inspections.

expanding access to care. The report also recommended broadening insurance coverage to include effective outpatient treatments and better equipping health care providers to recognize and screen for substance use problems so they can refer patients to appropriate, evidence-based treatment when needed. The IOM report also notes that addressing substance use in the military will require increasing confidentiality and shifting a cultural climate in which drug problems can be stigmatized and evoke fear in people suffering from them.  $\frac{6}{}$ 

In 2013, the VHA began the Opioid Safety Initiative, a multifaceted intervention that has been associated with a 16% reduction in opioid prescribing in the first two years. The VHA also recently revised its clinical practice guidelines for prescribing opioids for chronic pain, and has increased its resources for consumers, including a consumer fact sheet on safe and responsible use of opioids for chronic pain.

In 2016, the military's Tricare health system for active duty personnel announced it was expanding its treatment services to include intensive outpatient programs. Its health system web site now offers an alcohol and drug use assessment tool at <a href="https://www.health.mil/Military-Health-Topics/Conditions-and-Treatments/Substance-Abuse">https://www.health.mil/Military-Health-Topics/Conditions-and-Treatments/Substance-Abuse</a>.

The Veterans Administration has also developed the National Strategy for Preventing Veteran Suicide, which provides a framework for identifying priorities, organizing efforts, and contributing to a national focus on veteran suicide prevention. From 2015-2016, the number of suicides per year among veterans decreased.

#### Treatment

Treatment for various substance use and mental disorders are available through military health systems and have been shown to be effective. Treatments include behavioral interventions and medicines when available. All treatment should be individualized, including approved medication options approved for patients with alcohol, nicotine and opioid use disorders.

There are three FDA-approved medicines to treat opioid addiction, offering options to meet individual needs. Buprenorphine and methadone are medicines that bind to the same receptors in the brain as opioids, called opioid agonists or partial agonists. Naltrexone is another medication that treats opioid addiction, but it is called an antagonist, preventing opioids from having an effect on the brain. Additionally, the Food and Drug Administration recently approved a medicine called lofexidine to help make withdrawal symptoms easier for people who are trying to stop using opioids, which should be followed with engagement in treatment.

While many treatment centers do not offer these medications, the National Academy of Sciences recently issued a scientific report stating that medications for opioid use disorder are effective, save lives and have better long-term outcomes than treatment that does not include medications.

A combination of medication with behavioral therapy can reinforce treatment goals, rebuild relationships with friends and family, and build healthy life skills.

The Veterans Health Administration acknowledges that treatment with medications for opioid use disorder, including opioid agonists (methadone or buprenorphine), is the first-line treatment for opioid use disorder and recommends it for all opioid-dependent patients. Notably, a 2015 revision of treatment guidelines for the U.S. Department of Veteran Affairs and U.S. Department of Defense shifted toward allowing these medications as a treatment option for active duty military members. However, despite evidence of effectiveness, these medications are prescribed to fewer than 35% of Veterans Health Administration patients diagnosed with opioid use disorder. Barriers to opioid agonist medication among VHA providers include lack of perceived patient interest, stigma toward the patient population, and lack of education about opioid agonist treatment.

Families with loved ones with opioid use disorders should investigate having the medicine <a href="mailto:naloxone">naloxone</a> on hand to reverse an opioid overdose. An easy- to- use nasal spray is available at many pharmacies without personal prescriptions.

#### **Current Research**

NIDA and other government agencies continue to <u>research strategies</u> for managing substance use disorders and related mental health issues in people with military experience. The research questions can be complex and vary with different population subtypes, and can reveal the need for additional research directions. For example, a 2019 study looked at the effectiveness of integrating treatment for both SUDs and PTSD, concluding that veterans with PTSD and co-occurring polysubstance use issues (as compared to a single substance use issue) may experience greater improvement in substance use but less improvement in PTSD symptoms. Another 2019 study identified chronic pain as a common condition among polysubstance users and showed the importance of incorporating interdisciplinary pain management approaches during treatment to reduce reliance on long-term opioid therapy and improve rehabilitation. NIDA will continue to focus on developing evidence-based strategies to help this population return to productive military and civilian lives.

Resources for Military Members, Veterans, and their families

- Veterans Crisis Line/Suicide Hotline: 1-800-(273)-8255 or send a text message to 838255
- Resources for homeless in your community
- Where to find opioid overdose reversal medication, naloxone
- U.S Department of Veterans Affairs
- FREE VA online resource for military members concerned about their drinking
- Alcohol Treatment Navigator (NIAAA)
- Opioid Safety Initiative Toolkit (for consumers and clinicians)
- VA/DoD Clinical Practice Guidelines for the Management of Substance Use Disorders
- SAMHSA's Technical Assistance Resources for Veterans
- Substance Use Treatment for Veterans
- Current Research and Resources from NIDA
- Military One Source
- Becoming a Smoke Free Veteran

#### Learn More

For additional information on drug abuse in the military, see <a href="www.drugabuse.gov/related-topics/substance-abuse-in-military-life">www.drugabuse.gov/related-topics/substance-abuse-in-military-life</a>

If you are a veteran in crisis — or you're concerned about one — free, confidential support is available 24/7. Call the Veterans Crisis Line at 1-800-273-8255 and Press 1, send a text message to 838255, or chat online. (Web Link:

https://www.mentalhealth.va.gov/MENTALHEALTH/suicide\_prevention/index.asp?\_ga=2.148689847.125630 1259975347.1556635434)

#### References

- 1. Larson, M. J., Wooten, N. R., Adams, R. S., & Merrick, E. L. (2012). Military combat deployments and substance use: Review and future directions. *Journal of social work practice in the addictions*, 12(1), 6–27. doi:10.1080/1533256X.2012.647586
- 2. Meadows, S.O., Engel, C.C, Collins, R.L, et al. (2015). Health Related Behaviors Survey: Substance Use Among U.S. Active-Duty Service Members. Santa Monica, CA: RAND Corporation, 2018. https://www.rand.org/pubs/research\_briefs/RB9955z7.html.
- 3. Teeters, J.B., Lancaster, C.L., Brown, D.G., & Back, S.E. (2017). Substance use disorders in military veterans: prevalence and treatment challenges. *Substance Abuse and Rehabilitation*. 8, 69-77. doi:10.2147/SAR.S116720.
- Jamal, A., King, B.A., Neff, L.J., et al. (2016). Current cigarette smoking among adults—United States, 2005-2015. MMWR Morbidity and Mortality Weekly Report, 65, 1205-1211. doi: http://dx.doi.org/10.15585/mmwr.mm6544a2
- Veteran's Primary Substance of Abuse is Alcohol in Treatment Admissions, The CBHSQ Report, SAMHSA, November 10, 2015.
   https://www.samhsa.gov/data/sites/default/files/report\_2111/Spotlight-2111.html
- 6. Institute of Medicine. Substance Use Disorders in the US Armed Forces. Washington, DC: National Academies Press; 2013. <a href="https://www.nap.edu/catalog/13441/substance-use-disorders-in-the-us-armed-forces">https://www.nap.edu/catalog/13441/substance-use-disorders-in-the-us-armed-forces</a>
- 7. Nahin R. L. (2017). Severe pain in veterans: The effect of age and sex, and comparisons with the general population. *The journal of pain: Official journal of the American Pain Society,* 18(3), 247–254. doi:10.1016/j.jpain.2016.10.021
- 8. Lewei, A.L., Peltzman, T., McCarthy, J.F., et al. (2019). Changing trends in opioid overdose deaths and prescription opioid receipt among veterans. *American Journal of Preventive Medicine*, 57(1), 106-110. https://doi.org/10.1016/j.amepre.2019.01.016
- 9. Odani, S., Agaku, I.T., Graffunder, C.M., et al. (2018). Tobacco product use among military veterans—United States, 2010-2015. *MMWR Morbidity and Mortality Weekly Report,* 67, 7-12. doi: http://dx.doi.org/ 10.15585/mmwr.mm6701a2
- 10. Shahoumian, T.A., Phillips, B.R., & Backus, L.I. (2016). Cigarette smoking, reduction and quit attempts: Prevalence among veterans with coronary heart disease. *Preventing Chronic Disease*. 13(E41). doi: 10.5888/pcd13.150282.
- 11. Substance Abuse and Mental Health Services Administration. (2012). Behavioral health issues among Afghanistan and Iraq U.S. war veterans. *In Brief*, Volume 7, Issue 1. Retrieved from

#### http://www.pacenterofexcellence.pitt.edu/documents/SAMHSA%20In%20Brief.pdf

- Center for Behavioral Health Statistics and Quality. (2016). Key substance use and mental health indicators in the United States: Results from the 2015 National Survey on Drug Use and Health (HHS Publication No. SMA 16-4984, NSDUH Series H-51). Retrieved from <a href="http://www.samhsa.gov/data/">http://www.samhsa.gov/data/</a>
- Department of Veterans Affairs, Veterans Health Administration, Office of Mental Health and Suicide Prevention. (2018). Veteran suicide data report, 2005–2016. Retrieved from <a href="https://www.mentalhealth.va.gov/docs/data-sheets/OMHSP\_National\_Suicide\_Data\_Report\_2005-2016\_508-compliant.pdf">https://www.mentalhealth.va.gov/docs/data-sheets/OMHSP\_National\_Suicide\_Data\_Report\_2005-2016\_508-compliant.pdf</a>
- 14. Department of Veterans Affairs, VA Suicide Prevention Program. (2016). *Facts About Veteran Suicide*. Retrieved from <a href="https://www.va.gov/health-care/health-needs-conditions/mental-health/suicide-prevention/">https://www.va.gov/health-care/health-needs-conditions/mental-health/suicide-prevention/</a>
- 15. Ilgen, M., Bohnert, A., Ganoczy, D., et al. (2016). Opioid dose and risk of suicide. *Pain.* 157(5). doi: 10.1097/j.pain.000000000000484.
- 16. Center for Behavioral Health Statistics and Quality. (2014). Twenty-one percent of veterans in substance abuse treatment were homeless. *The TEDS Report*. Retrieved from <a href="https://www.samhsa.gov/data/sites/default/files/spot121-homeless-veterans-2014.pdf">https://www.samhsa.gov/data/sites/default/files/spot121-homeless-veterans-2014.pdf</a>
- 17. Perl, L. (2013). *Veterans and Homelessness*. Washington, D.C. Congressional Research Service Report for Congress. Retrieved from <a href="https://fas.org/sgp/crs/misc/RL34024.pdf">https://fas.org/sgp/crs/misc/RL34024.pdf</a>
- U.S. Department of Veteran Affairs. (2015). VA/DoD clinical practice guideline for the management of substance use disorders. Retrieved from https://www.healthquality.va.gov/guidelines/MH/sud/VADoDSUDCPGRevised22216.pdf
- 19. Finlay, A.K., Wong, J.J., Ellerbe, L.S., et al. (2018). Barriers and facilitators to implementation of pharmacotherapy for opioid use disorders in VHA residential treatment programs. *Journal of Studies on Alcohol and Drugs.* 79(6), 909–917. doi: <a href="https://doi.org/10.15288/jsad.2018.79.909">https://doi.org/10.15288/jsad.2018.79.909</a>
- 20. Department of Defense. (2016). Tricare; Mental health and substance use disorder treatment. Federal Register. Volume 81, Issue 171. Retrieved from <a href="https://www.govinfo.gov/content/pkg/FR-2016-09-02/pdf/2016-21125.pdf">https://www.govinfo.gov/content/pkg/FR-2016-09-02/pdf/2016-21125.pdf</a>
- 21. U.S. Department of Veteran Affairs. (2018). Safe and responsible use of opioids for chronic pain. Retrieved from <a href="https://www.va.gov/PAINMANAGEMENT/Opioid\_Safety/OSI\_docs/10-791-Safe\_and\_Responsible\_Use\_508.pdf">https://www.va.gov/PAINMANAGEMENT/Opioid\_Safety/OSI\_docs/10-791-Safe\_and\_Responsible\_Use\_508.pdf</a>

- 22. Lin, L.A., Bohnert, A.S., Kerns, R.D., et al. (2017). Impact of the Opioid Safety Initiative on opioid-related prescribing in veterans. *Pain.* 158(5), 833-839. doi: 10.1097/j.pain.000000000000037
- National Academies of Sciences, Engineering, and Medicine. (2019). Medications for Opioid Use Disorders Save Lives. Washington, D.C. The National Academies Press. https://doi.org/10.17226/25310
- 24. Jeffirs, S.M., Jarnecke, A.M., Flanagan, J.C., et al. (2019). Veterans with PTSD and comorbid substance use disorders: Does single versus poly-substance use disorder affect treatment outcomes? Drug and Alcohol Dependence. 199, 70-75. doi: <a href="https://doi.org/10.1016/j.drugalcdep.2019.04.001">https://doi.org/10.1016/j.drugalcdep.2019.04.001</a>.
- 25. Adams, R.S., Larson, M.J., Meerwijk, E.L., et al. (2019). Postdeployment polytrauma diagnoses among soldiers and veterans using the Veterans Health Affairs polytrauma system of care and receipt of opioids, nonpharmacologic, and mental health treatments. *Journal of Head Trauma Rehabilitation*. 34(3), 167-175. doi: 10.1097/HTR.0000000000000481
- 26. Schoenborn, C.A., Gindi, R.M. (2015). Electronic cigarette use among adults: United States, 2014. NCHS Data Brief, No. 217, Hyattsville, MD: National Center for Health Statistics, 2015. https://www.cdc.gov/nchs/data/databriefs/db217.pdf
- 27. U.S. Fleet Forces Public Affairs. (2017). Navy Suspends Electronic Nicotine Delivery Systems (ENDS) on Ships, Subs, Aircraft. April 14, 2017. Retrieved from: https://www.navy.mil/submit/display.asp?story\_id=99913.
- 28. Army Public Health Center. (2019). Vaping: E-cigarettes and Personal Vaporizers. October 8, 2019. Retrieved from <a href="https://phc.amedd.army.mil/topics/healthyliving/tfl/Pages/Vaping.aspx">https://phc.amedd.army.mil/topics/healthyliving/tfl/Pages/Vaping.aspx</a>
- 29. Lopez, C.T. (2019). Military exchanges extinguish vape sales. October 16, 2019. Retrieved from https://www.army.mil/article/228521/military\_exchanges\_extinguish\_vape\_sales

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